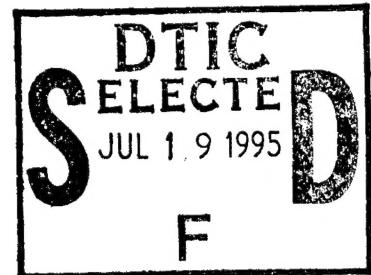


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**NAVAL DOCTRINE COMMAND**  
**Norfolk, Virginia**



The History of Italian Naval Doctrine

by

Vice Admiral Luigi Donolo, Italian Navy (Ret.)  
and  
Dr. James J. Tritton

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NAVAL DOCTRINE COMMAND  
Norfolk Virginia

Rear Admiral F.L. Lewis  
Commander

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THE HISTORY OF ITALIAN NAVAL DOCTRINE

by

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Introduction: Doctrine

The terms military doctrine and naval doctrine are used only quite rarely by Italian authors. They are often used, instead, to mean military art, naval art and sometimes strategy. Before we can consider what is meant by military or naval doctrine in Italy, we will, therefore, need to first address these concepts of military and naval art and strategy.

In Italian, art means the combination of techniques or methods that can be used to achieve goals (for example in a profession or in a business). Military art should therefore be the complex of knowledge, techniques and methods, acquired through study or experience used to prepare the military instrument. The purpose is to obtain a sound decision-making instrument and an effective combat leadership. The goal is the victory.

Italian lieutenant general Raimondo Montecuccoli fought in the 17th Century for the Austrian Hapsburg's empire. He won over forty battles and wrote a great deal on military art--his major work was *Trattato dello guerra* [Treatise on War]. The quality and originality of his thoughts deserve to be mentioned, as they have a dignity equal to Clausewitz's. The military art of Montecuccoli is the art of fighting well to win.

Another interesting definition of military art has been proposed by Rear Admiral Luigi Fincati in his book *Military Aphorisms* (1882). Military art is for him "the complex of knowledge and capacities needed to coordinate, move, and lead a group of armed men against the other side, obtaining the best from each element and maintaining the group's cohesion at the same time."

According to Admiral Giuseppe Fioravanzo in his *A History of Naval Tactical Thought* (1956), military art is a combination of strategy and tactics, where strategy is defined as "the art of conducting war" and tactics as "the art of fighting war." This latter definition of military art seems incomplete and excessively general and shows how difficult it is to set the boundaries of the meaning of some words. The term doctrine has

<sup>1</sup> The views expressed by the authors are theirs alone and do not necessarily represent those of the U.S. government, Department of Defense, or the U.S. Navy. The authors would like to acknowledge the assistance of Commander Fernando Cerutti, ITN, for his assistance in the translation and editing of this report.

also been used in Italy to mean tactics when referring to tactical-level doctrine.

In Italy, strategy is generally understood as the concept of using the battle for the purposes of the war, or, using military means in support of politics. Today's military strategy is usually defined as the element of general strategy that indicates the way the military should act to achieve the objectives given by national military politics, by an alliance or a coalition.

The term military politics is commonly used to mean a distinct part of general politics. It is based on the nation's historical and social background and is driven by the current situation and the available resources. Military politics establish the general objectives to be achieved on the military side to fulfill the needs of the country, associated international institutions, or alliances. Military politics must operate to preserve, support and integrate the overseas policies where and when relationships have been established.

For a better understanding of the concept of military or naval doctrine, it is first necessary to point out how the term doctrine itself is generally used in Italy. According to current interpretations, in Italian, the term doctrine is:

"the whole of notions or principles, organically elaborated and ordered, to be considered either as an object to study or as a standard for theory and practice."

or

"the whole of knowledge, acquired and coordinated through study, which forms the culture of a person or of an organization."

Doctrine, therefore, can either be firmly prescriptive, like in religion or in a political ideology, or basically descriptive. As a complex of principles, military doctrine may, therefore, deal with more than one area. It is acceptable in Italy that this term be used as a substitute for military politics, strategy or tactics.

Military doctrine is, therefore, one of the most controversial terms in Italy as it may have several different interpretations. According to many Italian writers, military doctrine should be mainly descriptive, and leave the necessary freedom of action to deal with particular events or exceptional situations.

For the purpose of this report, it is sufficient to consider military doctrine as the collection of rules and principles indicating how to conduct military operations with the aim of fulfilling strategic objectives. Military doctrine takes into

account the lessons taught by history, the decisions in military politics and the strategies chosen to deal with crises, conflicts and so on. This definition places military doctrine on a hierarchical level that stands below military politics and strategy, and above tactics.

Doctrine is closely connected to military art. A graphical representation could be a circle where military politics, military strategy, military doctrine, naval doctrine, and tactics lie. These are normally connected sequentially but are also linked to each other by lines indicating reciprocal influence and dependence.

The term naval doctrine is synonymous with that of naval thought. Naval doctrine includes the preparation of naval assets and their planned use in war or in an emergency. Naval doctrine affects the Navy's organization and administration, training of personnel, the procurement of new armaments, and naval strategies and tactics are included. Hence, the core of naval doctrine is the set of principles which guide a naval organization in war or carrying out other maritime operations in peace time or during a crisis. Naval doctrine is the set of principles, rules (and also beliefs and values) which indicate what that navy must be, who or what it must represent, how it must behave and for what future perspectives it must prepare itself.

As the doctrine of the Italian Navy must consider all the forms of cooperation with other Services and allied nations, and all the possible missions, there are associated specialized doctrine for cooperation with air forces and doctrine when operating under NATO or United Nations Organization auspices.

Naval doctrine therefore represents the essential link between strategy and tactics: if there is no doctrine, strategy cannot be translated into tactical actions. It has generally a long lifetime while strategy and tactics are more dynamic. Naval doctrine is also subordinate to military doctrine. Doctrine must be a guide for all those serving in the Navy, in all the occasions and for all the undertakings. It must be a reference point for everybody.

As far as the reconstruction of the history of naval doctrine in Italy is concerned, we must bear in mind that, while military literature on land operations can boast a very rich and ancient bibliography, there are few counterpart treatments of naval doctrine. The reason for the lack of development of separate naval doctrinal literature is probably that events at sea were not so suitable to academic inquiry and naval operations were often seen as complementary and paralleling those ashore. We will now turn to a combination of the observed behavior of Italian navies, to ascertain their actual doctrine, and to those

few examples of literature which codified the doctrine on the written page.

### Early Italian Navies

Some of the greatest battles of medieval history were fought in the Mediterranean by the maritime republics of Genoa, Pisa and Venice. A fourth republic, Amalfi, had a merchant navy tradition. The maritime tradition established by these republics was kept alive and the Italian Navy flag has sported their coats of arms since the Italian Republic was established in 1946.

The Battles of Meloria (1284), between the Pisans and the Genoans; Curzola (1298), between the Venetians and the Genoans; and Bosphor and Loiera (1352) between the Genoans and a coalition led by the Venetians, are all examples where tactical art was written "at sea" by successful admirals in the age of oar. Firearms were used aboard ships at the Battle of Zierikzee (1304) where the Genoese admiral, Ranieri Grimaldi, defeated the Flemish.

At the Battle of Curzola, the Genoese admiral, Lamba Doria's superiority in tactics resulted in a defeat of the numerically more powerful Venetian fleet. Admiral Lamba Doria's tactics were essentially to close the enemy quickly, break through the enemy defensive formation, concentrate his force against only a part of the enemy line, and then to commit his reserves at the height of the battle. Reserves were considered so important that they were maintained even at the expense of a reduction of the main forces. The Genoans were the unbeaten masters in applying this doctrine. Their attacks were always carried out at the right moment, in a very decisive way, and using stratagems such as hiding the reserve.

Upon occasion, written fighting instructions were known to have been issued by various naval commanders operating in Renaissance Venice. The earliest of these efforts are the *Orders and Signals* of the Venetian Fleet in 1365.<sup>1</sup> These orders included specific operational formations as well as signals indicating the fleet commander's intent.

By the time of the Battle of Lepanto (1571), the primarily unwritten doctrine and tactics of galley warfare in the Mediterranean had been perfected to such a state that each side could have been considered masters of the naval art. Indeed, the battle was fought much the same as a joust between knights, with all of the formalities accorded gentlemen under arms. Although the Christian commander at Lepanto, Don John of Austria, was Spanish, the ships were virtually all from Italian city-states, the largest contribution coming from Venice. The Christian fleet numbered well in excess of 200 galleys, galleasses, and

subsidiary ships of sail, and the Turkish fleet had roughly the same strength. The Christians had superiority in numbers of cannon, roughly 2.4:1. Christian forces fought as an integrated multinational force. Overall political objectives were set by the Pope and Philip II of Spain.

Before sailing, each Christian captain received written orders from Captain-General Don John outlining specific cruising and battle stations. The overall tactical objectives were to select an opponent, ram, and board in a general mêlée. The Turkish commander-in-chief, Ali Pasha, fought a brave battle but in the end lost his life, and his force was defeated. The battle appears to have turned, in part, due to Christian superior firepower, technology (ship construction, providing protection for the crew, and personal armor), new ship design (galleasses), favorable winds, and doctrine/tactics (galleasses placed ahead of the galleys and cannon used more freely and at point blank range). Lepanto signaled the virtual end to traditional galley tactics and the age of oared ships and ushered in the superior ships of sail.

The general concepts of doctrine during medieval times were rarely described by any of the admirals nor routinely codified on paper. Doctrine must be deduced from events at sea. One major exception to this rule was Pantero Pantera, an academic and ship commander of the Pontiff Navy. His *L'armata navale* [The Naval Fleet] in two volumes (1614) managed to condense all that was known about the art of warfare at sea.<sup>2</sup>

#### Pre-Unitary Navies: 1750-1861

During most of this period, pre-unitary navies carried out independent campaigns and rarely fought as a single fleet. It is necessary to examine their history separately, up to the birth of the Italian Navy after the establishment of the Kingdom of Italy, in 1861.

Among the navies of the Italian Peninsula, those of Naples and of the Kingdom of Sardinia were the most significant, although they were minor in comparison to great oceanic navies like those of England, France, and Holland. Most of the time, the navies of the Italian Peninsula were used in co-operation with the British or French fleets to counter piracy in North Africa or contain wars in progress in the Mediterranean. Warfare at sea consisted primarily of combat involving single ships or squadrons, naval blockades, and off-shore bombardments.

Frequent foreign invasions and the high number of states within Italy caused a political instability. This affected the preparedness of the fleets and the performance of the personnel,

especially the officers. Officers often came from the Army or were recruited from other Italian or foreign states.

### Neapolitan Navy

Naples' history is intertwined with that of Spain, hence there is a great deal of Spanish influence in Neapolitan Navy doctrine. In the mid-1700's the situation of the fledgling Kingdom of Naples' Navy was anything but good. It was not well organized and had no real doctrine for the employment of its forces. The arrival of the British adventurer, Admiral John Edward Acton in 1779 marked a clear turning point. Acton, who was summoned by Bourbon King Charles III, had previously served in the French Navy and with Tuscan naval forces. He started a thorough renewal program with the objective of providing the Navy with more wide-ranging international experience. Acton brought experienced foreign officers and skillful engineers to Naples and sent Neapolitan officers and technicians to other countries for training. Several Neapolitan officers embarked on Spanish and French ships and took part in the American War of Independence.

Acton's concept of naval force employment went beyond coastal defense and included an active role in distant-water multinational operations. Neapolitan ships were active and successful during the hostilities between Spain and Algeria in 1784, as well as in other circumstances. In a few years, the Neapolitan fleet reached the level of capability needed for the political role to which the Kingdom of Naples aspired. At that time Naples was the major coastal state in Italy.

When the French Revolution broke out, the Kingdom of Naples signed a naval pact with Britain and bravely fought in 1793 to defend Toulon. In 1795 the Neapolitan Navy fought with a British squadron commanded by Admiral Lord William Hotham against the French fleet led by Rear Admiral Pierre Martin at Capo Noli. One of the British ships was commanded by Horatio Nelson and a Neapolitan frigate by Francesco Caracciolo.

With the eventual conquest of Naples, King Ferdinand IV escaped to Palermo, Sicily on board one of Nelson's warships escorted by a Neapolitan naval division commanded by Admiral Caracciolo. The remainder of the fleet was burnt to avoid the capture. After this mission, Caracciolo returned to Naples. Disappointed by the surrender of his king, he turned himself against the British. Caracciolo was eventually captured by Nelson, court martialed, condemned and hung on board the Neapolitan corvette *Minerva* that he once commanded when he held the rank of Commander.

Despite various contrasting evaluations, Caracciolo is considered a patriot by many. This episode reveals differences in the sense of duty and loyalty--contrasting doctrines in the Royal

Navy and the Neapolitan Navy. Nelson was governed by an absolute duty of a commander to maintain loyalty to his sovereign under whatever conditions and in whatever situation. The conduct of Caracciolo was inspired, instead, by the consideration that there could no longer be any duty of loyalty toward a sovereign who had abandoned the capital under foreign threat. Caracciolo also felt that supporting the new ideals of liberty, equality, freedom and justice was his first duty as a citizen and a soldier.

This way of perceiving and interpreting reality will be found again in the history of the Neapolitan and Italian navies throughout their history. In this period, the old Neapolitan Navy was divided into two--each fighting against the other. A small Neapolitan Navy was allied to the French while the larger Sicilian Navy was allied to Britain. The conduct of the Neapolitan Navy was very aggressive and they showed determination against a far more powerful British fleet.

In 1814 an interesting book by Giulio Rocco, titled *Riflessioni sul potere marittimo* [Considerations on Maritime Power], was printed in Naples. Rocco had served in the Spanish Navy. *Considerations on Maritime Power* introduced the term maritime power, almost completely unheard before, and defined its most important elements and the relationships between those elements.

After the defeat of Napoleon in Russia, the Bourbons returned to Naples (1815) and the Navy was once again reorganized. Maritime responsibilities were shared between three Maritime Areas (Naples, Palermo and Messina) and new doctrine was established. Admiral Acton's doctrine was updated with the publication of the *Regulations of the Royal Navy*, which also was influenced by French and Spanish doctrine.

For example, as contained in earlier Spanish doctrine, some Neapolitan officers (vessel officers) were tasked to fight, while others, known as pilots, were responsible for seamanship. Vessel officers were predominantly of noble origin while the pilots came from all classes. Enlisted specializations were similarly split into artillery cannoneers, whose duty included vigilance over the ship, and sailors who handled the sails and other seamanship duties. The Neapolitan Navy had a fleet with good material condition, but one that was not particularly useful because of the poor level of training of officers and crews. Military and patriotic spirit was lacking, and the soldiers were not convinced either of the goodwill of the Navy or of their longevity. Generally morale was not good in the Neapolitan Navy.

During the period 1820-1830 the Neapolitan Navy became aware of the new technical possibilities given of propulsion. In the 1830's the Kingdom of the Two Sicilies (Naples and Sicily) built many steam ships of excellent quality. In 1825 Neapolitan ships

carried out a bombardment against Tripoli to convince the Bey to suspend his piracy activities. A similar operation was carried out in 1833, in conjunction with Sardinian ships, against Tunisia, to force the respect of some agreements.

The Neapolitan Navy was normally not deployed outside the national waters. The government feared that crews could be contaminated by liberal thoughts. Given the 1820 revolt in Naples and others elsewhere in Italy, the government was probably correct in its fears. One exception to this rule was that, in 1843, the Neapolitan Navy deployed ships to Brazil and to the Rio della Plata.

In 1848 the Neapolitan Navy deployed, with some sections of the Army, to the Adriatic Sea where they jointed with Sardinian and Venetian ships to defend a new Republican government in Venice against Austria. This campaign was led by Admiral De Cosa. Later on after facing a revolt in Naples, the King withdrew his ships and troops and sent them to attack Republican secessionists in Sicily. This withdrawal created severe problems of conscience for Admiral Di Cosa, who was torn between obedience to the King's orders and his desire to be a part of events which were crucial for the independence and the unity of Italy. Di Cosa resigned from the Navy in a situation similar to that faced by Francesco Caracciolo.

The Neapolitan Navy operated for the last time in 1860 in unsuccessful opposition to the landing on Sicily of General Giuseppe Garibaldi and his corps of volunteers. The Navy also supported the abortive attempt to re-take the island. During the conquest of Sicily, Garibaldi set up a small, but aggressively trained, Sicilian Navy. It created its own regulations and was equipped with crews and ships mostly coming from the merchant navy. The Sicilian Navy captured Neapolitan ships and supported landing operations which resulted in the eventual capture of Naples.

#### Sardinian-Piedmontese Navy

The island of Sardinia also has a mixed heritage, with Spanish ancestry. Piedmont is located near the French border in the region of Turin. These two regions were once combined as the Kingdom of Sardinia. The establishment of



a Sardinian-Piedmontese Navy, or Sardinian Navy, took place sometime after the founding of the Kingdom of Sardinia under the leadership of Savoy (part of Piedmont). Originally it was a small navy with light units, mainly dedicated to battle with the pirates infesting the coasts of Sardinia.

By 1764, this Navy grew to include frigates that could be operated at a greater distance from the shoreline. Crews were mainly composed by Ligurians (Genoa's region). The service was managed in the British way, and commands were given in French. This small navy also had a naval infantry which was used to defend coastal areas more than for offensive tasks.

Sardinia successfully defended itself against French attacks under Napoleon. In 1796, the King, Carlo Emanuele IV of Piedmont, escaped to and obtained refuge in Sardinia. The Navy continued its primary activity of coastal defense and actions against pirates--but now in cooperation with the British. Napoleon could not tolerate having Sardinian ports available to the British and attempted, unsuccessfully, to prevent their use of the Sardinian waters.

After the Napoleonic wars (Vienna Conference 1815), Sardinia took back Piedmont and acquired Liguria. The Sardinian Navy became better regulated. A new Navy commander, Admiral Des Geneys, established two naval infantry regiments that included their own organic artillery. The maritime areas of Genoa, Villafranca and Cagliari and a marine school (1816) were established as well. The number of ships was increased and the Sardinian Navy became a particularly efficient instrument. Ships were used for diplomacy and to support a coup at Tripoli (1822).

In 1826 Admiral Des Geneys published a new set of regulations concerning service, discipline, uniforms and artillery. In 1830 administrative regulations were enacted. All of these regulations were made in French; the Italian language became obligatory later.

During the Greek War of Independence (1821-1830), the Sardinian Navy was used to protect its merchant traffic and consulates in the Mediterranean. From 1834, Sardinian warships operated in South American waters, especially off Brazil and in the Mar del Plata. Cruises to the Pacific were made via Cape Horn.

In 1837 steam propulsion was introduced, starting with merchant ships and corvettes. In March 1840, the Sardinian Navy was reorganized once again. A General Staff of the combined forces was introduced. A solid merchant fleet gradually developed alongside the Navy. Giuseppe Garibaldi was one of the captains of this merchant fleet.

After the Milan uprising in 1848, King Carlo Alberto declared war against Austria. Sardinian naval infantry took part in the land campaign while a squadron, under Admiral Albini, was sent into the Adriatic and joined the Neapolitan fleet in support of the new Republic of Venice. On April 15, 1848 Sardinian ships hoisted, for the first time, the Italian tri-color flag with the Savoy's coat of arms. The Sardinian squadron was involved in actions against the forts and in blockades of Trieste and in action along the Venetian coast. Following the armistice, the Sardinian Navy cooperated extensively with the French and British.

In 1855, the Kingdom of Sardinia participated with France and Great Britain in the Crimean War against Russia. A 15,000 man expeditionary corps was sent by sea to the Crimean Peninsula. The Sardinian Navy, in cooperation with the British, sustained the main logistic effort assuring the continuous flow of supplies from Italy and managing merchant ships' requisition and hire. Its integration with the allied naval forces was outstanding and the experience acquired was extremely important. This experience was very helpful five years later when the Sardinian Navy became the core of the Italian Navy.

#### Venetian Navy

The Venetian Navy was famous for its rigorous regulations, healthy administrative principles, and the close relationships between its Superintendents and the Senate of the Republic. In wartime, the Republic selected a General Captain, to whom absolute power was given. When the war was over, the General Captain was not to return directly to the city of Venice itself. He was to berth his ships in some other port and travel from there to Venice in civilian clothes. There his action was judged by the Senate.

Trade relations with the East, that once constituted the fortune of the Venetian Republic, were greatly reduced after the discovery of America, when trading interests switched from the Mediterranean Sea to the Atlantic Ocean. The Venetian Navy, that had maintained the absolute dominion of the Adriatic Sea and of part of the Mediterranean for centuries, became a modest one and it operated in far more limited areas than before following the loss of foreign bases. By the middle 1700's, Venice had become an advocate of peace and neutrality. Yet the Venetian Navy still had some military power and could not be ignored. On the other hand, it lacked the necessary spiritual and political energy as a warfighting force.

In 1749 the Republic conceived a league with the Knights of Malta's naval forces, those of the Kingdom of the Two Sicilies, and the Pontiff's fleet to counter the threat of North African piracy. In 1767 Venice took the initiative and sent a naval

squadron, under Admiral Angelo Emo, that landed in Algeria and forced the Bey of Algiers to take action. In 1784 Venice sent Admiral Emo again to North Africa, where he bombarded the port of Susa, set a naval blockade at Tunis and Susa, and then monitored, from Malta, the pirates' activity. Admiral Emo's transport of heavy cannons through shoal waters deserve mention. Cannons were off-loaded on special rafts; thus he surprised the enemy and created a tactic that since then has been copied by many others.

After Napoleon's conquest of Venice in 1797, many of the best ships and crews of the Venetian Navy were incorporated directly into the French Navy. When Napoleon was defeated, Venice was turned over to Austria and its Navy became the Imperial Royal Venetian Navy. In 1848, the Venetians rose up against Austria and proclaimed a short-lived Republic. Many of the Imperial Royal Venetian Navy ships stationed at Venice, whose crews were mostly of Italian origin, chose to side with the new Republic. The biggest part of the fleet was stationed at Pola (Istria Peninsula) and remained loyal to Austria. The Venetian Republic was reincorporated into Austria from 1849 and remained within the Austrian empire until its cession to Italy in 1866.

#### Other pre-unification Navies

There were many other states in pre-unification Italy which had navies. Only two of these will be covered in this report: the navies of the Pontiff and that of Tuscany. Their influence on Italian Navy doctrine is almost negligible.

The main objective of the Pontiff Navy was to take an active part in the struggle against the non-believers, the Moslems. The Vatican's Navy was particularly active in the 16th Century when it took part with a large number of ships in all important naval encounters of that period--including Lepanto (1571). It also cooperated with navies belonging to several knightly military orders. When Napoleon conquered Rome, the Pontiff's Navy was disbanded and all papal ships were later incorporated by the Italian Navy in 1860, when the papal port city of Ancona became part of the Kingdom of Italy.

The Tuscan Navy, inheritor of the medieval Pisan Republic Navy, decayed progressively over the years due to the constant reduction of budget. Despite this, Tuscan ships participated, along with the Venetians, in battles against the Turks. Its last major combat was during a war over Corfú (1715-1718). From the mid-1700's, the Tuscans limited their naval operations to the defense against the Turkish and the North African pirates infesting the Tuscan coasts. In 1775, a Tuscan squadron operating off North Africa was under the command of John Acton, who later went on to serve with the Neapolitan Navy.

Due to the limited number of ships available, the Granducato of Tuscany eventually needed the help of other Italian states, to protect his trade lines along the North African coast. Generally, it was the Kingdom of Naples that supported this suppression. In the 19th Century the Tuscan Navy was reduced to even more modest dimensions.

#### The Birth of the Italian Navy: 1861-1882

The official date of the birth of the Italian Navy is March 17, 1861 when the Sardinian, Neapolitan, and Tuscan navies, and few remaining ships from the Pontiff's Navy joined together. The new Kingdom of Italy was interested in creating a Navy appropriate for the international role the government wanted to fulfill. This became immediately evident when Camillo Benso di Cavour, the first Prime Minister, stated that "it is the duty of a state located in the middle of the Mediterranean to create [the basis for] the widest development of its naval resources, taking advantage of the elements of force of its own provinces".

But Italian naval policy was strongly conditioned by the prevalent land mentality of the politicians. The ships belonging to the Kingdom were extremely diverse, crews had different culture, and a common doctrine was absent. From the doctrinal point of view, an autonomous Italian idea was slow to emerge. Even the recent events of the American Civil War were not well known, and the technological innovations adopted in those circumstances got just minimal attention. On the other hand the tactics of the French Admiral Luis Bouët-Willaumez and the Russian Grigorij Boutakov were closely followed.

Bouët-Willaumez wrote a series of publications which pioneered advances in navy doctrine. His *Batailles de terre et de mer* (1855), attached to a *Project de tactique navale*, outlined provisional tactics for screw propelled steamships. Bouët-Willaumez's work was then adopted by the French Ministry of Marine in the form of their own doctrinal books published in 1857, outlining doctrine for ships of sail and steam. These French ministry doctrinal works and Bouët-Willaumez's other writings, especially his *Tactique supplémentaire: à l'usage d'une flotte cuirassée* (1865), were adopted by the Italian Navy in 1866 as the *Regolamento di tattica* [Tactical Regulations].<sup>3</sup> This doctrine paralleled a government decision in 1863 to shift from sail to steam and ironclads.

The tactical principles of French doctrine were applied, at least theoretically, in the famous and instructive Battle of Lissa (1866). These tactical principles included principles of war--rules for combat-- and movements of war--maneuvers to be executed by the main body and the flanks of the steam-propelled fleet to gain advantageous positions for combat. The general

strategy for employment of the fleet at sea was to form up with the French, Spanish, or British against a common foe. Yet in their first battle, Italy fought alone.

In 1866, the Italian fleet, under Admiral Count Carlo Pellione di Persano, met Austrian Rear Admiral Wilhelm von Tegetthoff off the island of Lissa (now Vis) in the Adriatic in the first battle between armored fleets. Persano's objective was to cover an abortive landing operation. Upon sight of the Austrian fleet, the Italians sortied their ironclads from the landing area to engage the enemy. Tegetthoff committed both his ironclads and wooden ships and scored a resounding defeat of the Italians, preventing the seizure of the island and driving off the Italian fleet.

Persano's fleet had twice the combat potential of the Austrians. Persano, however, had conducted no practice drills nor met with his captains to discuss how to best employ an ironclad fleet in conformance with the new doctrine. Instead, he assumed that the standing instructions and the new tactical doctrine were all that were needed and would be followed. The result was a disastrous *mêlée*. The embryonic Italian Navy had not yet had the time to exercise its new doctrine or formulate a national officer corps. It certainly had not had the years of experience that Horatio Nelson had when he trusted his "band of brothers" to carry out his standing orders.

In what has been described as one of the most unfortunate ideas that an admiral could have ever conceived, Persano changed his flagship while his battle line was still forming, and did not inform anyone. Nor did his subordinates see it due to a squall. Unfortunately Tegetthoff saw the resulting slowing of ships to accomplish the transfer and a break in the battle line. He aggressively maneuvered his force to take advantage. After the presumed flagship was sunk, a subordinate signalled for chase and freedom of maneuver, but that signal was cancelled by Persano who, in doing so, made his presence known aboard another ship.

The lessons of the Battle of Lissa weighed heavily upon the embryonic Italian Navy for many years to come. Although most analysts have demonstrated how this battle mistakenly influenced warship construction for the next 30 years (a resurrection of the ram), it was also to have a dramatic impact on understanding the importance of doctrine. Persano formed his fleet to maximize the performance of their guns, rather than the ram, but then spoiled the plan by his decision to shift flags. The Italians failed to take advantage of their superiority in combat potential or their formation's superiority over that of the Austrians (who were formed to maximize ramming).

The defeat must be imputed primarily to the lack of understanding between Admiral Persano and his commanders and to

the modest qualities of the Admiral himself. Persano did not take advantage of the greater flexibility of his line formation against Admiral Tegetthoff's wedge. Furthermore, after loosing two ships, he did not counter-attack despite the fact that he still outnumbered the Austrians. Austria used older and less well-armed ships, but the strong personality of Admiral Tegetthoff gave trust to crews and commanders, leading them to success.

In his book, *The Effect of Maritime Command on Campaigns Since Waterloo*, C.E. Callwell points out that the Battle of Lissa teaches a clear naval lesson: "ships themselves are not enough to form a fleet able to fight; a key truth that is sometimes forgotten even by nations more experienced than Italy."

The negative results of the Battle of Lissa had serious political and moral repercussions for the Navy. The Battle, however, increased the public's and politicians' awareness of conditions in the Navy. Political leaders began to understand the importance of sea control and its relationship with land operations. They began to realize that the transport of troops and coastline defense were not the only roles that navies played in directly and strategically influencing land operations.

The Battle of Lissa also marked the starting point of a new naval thought. The *Rivista Marittima* [Naval Journal], born in 1868, became an important vehicle for the discussion of new doctrine and strategy. Its writings captured the attention of the public and Parliament. It demonstrated the importance of the Navy. It proposed new fleet assets and organizational reforms as a consequence of the lessons learned from the defeat at Lissa and of new technological innovations. It was recognized that many of the ships that had fought at Lissa lost in one-against-one battles, so shipbuilding concepts shifted toward larger ships.

The follow-on debates on the pages of this journal helped in obtaining the funds necessary to achieve qualitative and numerical levels comparable to those of both Spanish and Austrian maritime forces. Despite some disagreements, from there on, the Navy was considered an indispensable instrument to conduct a solid foreign policy, rule the colonies, and assure the territorial defense.

The total renovation of the fleet was conceived and committed with a ten-year plan. In 1869 and in 1871 the Minister of the Navy, Rear Admiral Augusto Riboty, presented an *Organic Plan for the Navy* to the Parliament. In 1870, planning started for new battleships as well. These included the first warships with revolving towers and 450 mm caliber naval artillery, and were considered by many, especially the French, the most powerful ships of the time.

Italian Navy units stationed in the Red Sea from 1879 on, sometimes for very extended periods, carried out naval diplomacy missions in support of Italian colonies. The ships also carried out operations in direct and indirect support of the Army using arms and providing logistic sustainment, especially during the occupation of Eritrea (1882-1890).

In 1881 the Navy was debated again. The debate, involving both officers and Parliament, was about building battle cruisers instead of battleships. Numerous boards on the subject expressed different views. The new technologies had introduced new innovations which gave rise to many questions on what the right way was. Old prejudices slowed down the renewals. Despite the positive results obtained with the new warships, many people believed that the Navy was too ambitious, and preferred to look for a fleet of smaller units.

The supporters of large ships used examples from the British and American navies' experiences as ammunition against the idea that large ships were too slow or awkward in modern combat. Big ship supporters also had to contest the idea that the combat potential of a small number of large ships could be equally obtained by adding together the tonnage of a large number of small ships. Such an approach only provides equivalent tonnage and has no bearing on combat potential. This discussion was useful to define criteria for shipbuilding and start considering the political-military objectives given financial possibilities.

Under Minister of the Navy Ferdinand Acton (1880-1883), Italian naval shipbuilding programs and doctrine were strongly influenced by the French *jeune école*. Italian ship procurement shifted to fast, lightly armored ships. The Navy supported coastal fortifications and mine fields in conjunction with small well-armed naval units in defense of the coast. A few large battleships were maintained in addition. These battleships were not intended to contest command of the western Mediterranean but rather to act as a mobile fleet-in-being. If actually used in combat, they would primarily act as coastal defenders, breaking up enemy ships attempting a landing or engaging in shore bombardment.

Acton's program was opposed by Admiral Simone Pacoret de Saint Bon and Admiral Benedetto Brin. Each wrote books in 1881, *La questione delle navi* [The Question of the Ships] by Saint Bon, and *La nostra Marina Militare* [Our Military Navy] by Brin, which sought to argue the case for large capital ships and the decisive battle.

The role of the Navy during the occupation of Somalia was to support the initial invasion and subsequent diplomatic and military actions. During this operation, the Navy gained a vast experience on the world's oceans. International missions

undermined efforts to limit the Navy to the defense of maritime boundaries. Naval expeditions in the Far East and in South America supported this expanded role. Some twenty-one circumnavigations around the world also contributed to enlarge the Navy's views and to support a greater role for the Navy.

People became more aware of the need of harmonizing the basic preparation of naval officers. The two existing naval schools at Genoa and Naples were unified to form a single Naval Academy in Livorno between 1878 and 1881. In the meanwhile some profound changes were occurring in the international situation. The French conquest of Tunisia in 1881 affected Italian interests and caused Italy to come out of isolation. France, rather than Austria, became the assumed enemy. A costly competitive building program with France overtaxed Italian resources and left the Italian Navy with an excellent theory of naval construction, but no serious assets in the water.

#### From 1882 to World War I

In 1882 Italy signed the Triple Alliance Treaty with Germany and Austria-Hungary. The main objective of this treaty was the defense of the coastal regions. The French threat was assumed to be an initial strike at the Italian fleet, bombardment of the Ligurian and Thyrrenian coasts, neutralization of the railways followed by an amphibious landing which would cut Italy in two and outflank the land front. The Treaty was renewed in 1891.

Admiral Giovanni Bettolo, Minister of the Navy at the turn of the century, succeeded in starting a new shipbuilding program. His plan consisted of building small, fast armored ships carrying large caliber artillery, as well as new torpedo units.

One of the more important naval theorists of the 1880s and 1890s was Commander Domenico Bonamico. Bonamico first attained prominence with the publication of *La difesa marittima dell'Italia* [Maritime Defense of Italy] (1881). In this first work, Bonamico argued that navies were as important "as" land forces for the defense of Italy. Bonamico's ideas evolved with the publication of a subsequent book *La situazione navale mediterranea* [The Naval Situation in the Mediterranean]. In this later book, Bonamico aimed to develop a new regional organization able to control the vital points of the Mediterranean and thereby prevent general European wars.

Bonamico's major work was *Il problema marittimo dell'Italia* [The Maritime Problem of Italy] (1899). Bonamico accepted the increased role for the Navy in the defense of the national coastline. He outlined the fleet's main tasks as cooperation with the Army, control over the Tyrrenian Sea, prevention of attacks from the sea, and monitoring the mainland and coastal island areas. Additional duties were the protection of coastal cities

and installations against naval bombardments, the defense of maritime trade and the safety of the colonies. Following his prescriptions, Italy established a series of fortified naval bases on its own soil from which the fleet-in-being would maintain their vigil.

In another major work, *Il potere marittimo* [Maritime Power] Bonamico detailed the movement and dynamics of maritime power. Using historical case studies from the age of sail, he introduced the basic principles of war at sea. Bonamico argued that the military importance and influence of navies was now greater than ever before. Bonamico states that: "the entity and the character of a fleet must depend, first of all, on the objectives that the nations wish to achieve." Bonamico pointed out that while French strategy had to be essentially against Britain, Italian strategy should be based on the defense against maritime invasions. Without having attained success in the defense against maritime invasions, success in other mission areas was irrelevant.

By the end of the 19th Century, the writings of Captain Alfred Thayer Mahan in the United States, Vice Admiral Philip Colomb and Major C. E Callwell in Britain, also added to knowledge of naval war in the age of sail. Bonamico, Mahan, Colomb, and Callwell collected lessons of maritime history and recorded the naval doctrines of the time. These authors had a resounding effect in the Italian Navy. Bonamico even wrote a book about Mahan and Callwell. Mahan and Bonamico are considered, in Italy, the most important philosophers of naval theory because of their ability to learn the proper lessons of naval history.

Another significant author of the end of the century was Commander Augusto Vittorio Vecchj, also known as Jack La Bolina. Vecchj's book, *Storia generale della Marina Militare* [General History of the Military Navy] (1892), documented the history of the Italian Navy, an essential step for the formulation of doctrine. Between 1898 and 1902 Camillo Manfroni wrote a complete history of medieval Italian navies from the middle of the first millennium to the Battle of Lepanto. Manfroni developed historical information on construction techniques, naval customs, crew composition, armaments, and the nature of expeditions and the organization of the fleets.

Italian naval doctrinal thought received a further impulse from Lieutenant Giovanni Sechi. Sechi, an instructor at the Naval Academy, published his *Elementi di arte militare marittima* [Elements of Military Maritime Art] in two volumes between 1903-1906. In addition to a standard and orthodox treatment of naval strategy, emphasizing war at sea and the decisive battle, Sechi's book expressed an interest in combined operations and the role of logistics.

Sechi emphasized principles of naval strategy based on a clear definition of objectives, followed by the deduction of the operations that were possible given the capability of the fleet. He completed a theoretical treatment indicating which situations required temporary and which the absolute control of the sea. Sechi argued that strategic success, not tactical, could be pursued with two possible alternatives: a strategic offensive war or a strategic defensive war. He unusually interpreted the concept of fleet-in-being as an option which maintained naval forces deployed at sea rather than in port. Sechi successfully influenced the Italian government to obtain fast dreadnoughts. He was eventually promoted to Admiral and served as Chief of Staff of the Navy after World War I.

Two additional books, *Storia delle evoluzioni navali* [History of Naval Evolutions] (1899) and *Tattica nelle grandi battaglie navali* [Tactics in the Great Naval Battles] (1898) by Rear Admiral G. Gavotti were mostly descriptive, but again formed the basis of an understanding of how navies fought so that doctrine could be formulated by the Navy. Lieutenant Lamberto Vannutelli attempted to analyze night combat between ironclads and torpedo boats.<sup>4</sup>

Lieutenant Romeo Bernotti published a series of articles in *Rivista Marittima* which addressed doctrinal issues being debated in the fleet. His book *Fondamenti di tattica navale* [Fundamentals of Naval Tactics] (1910), was translated into English and published by the U.S. Naval Institute.<sup>5</sup> This book addresses both elements of maneuvering as well as specific tactical maneuvers and the conduct of battle as a whole. Bernotti argued that "war is decided by means of a decisive battle." He also addressed the dividing of fleets into principal and flying squadrons--whose job it was to execute an envelopment maneuver, or crossing the "T"--the proper distance for engagements as being that which allows the employment of all the fleet's assets, tactical vs. strategic victory, and warfare of annihilation vs. attrition. Bernotti did not develop historical examples for his doctrinal and tactical discussions, but rather assumed the reader knew these already.

The writings of foreign naval scholars also received attention in Italy. The pro-jeune école book *Essai de stratégie navale* (1893), by French Commander Gabriel Fontin (pseudonym H. Montéchant) and Lieutenant Paul Vignot (pseudonym Commandant Z), was translated into Italian. Sir Julian Stafford Corbett's historical analyses of doctrine, strategy, and tactics in the days of sail, *Some Principles of Maritime Strategy* (1911), was also studied in Italy. Russian Admiral Stephan O. Makarov wrote a book *Rassuzhdeniia po voprosam morskoi taktiki* [Discussion of Questions in Naval Tactics] (1898), which was translated into Italian.

At the beginning of the new century, the Triple Alliance had begun to weaken and appeared somewhat unreliable. Rivalry and disagreement arose with Austria. By the end of 1905 Austria was seen again as a potential adversary, stimulating an Italian-French reconciliation. The Navy was encouraged to strengthen the coastal defense around Venice and to improve the support capability of the port of Brindisi. Joint exercises with the land forces were intensified. More attention was spent to increase the combat potential of the fleet. The lessons learned from the Battle of Tsushima (1905) led to the construction of dreadnoughts and other fleet modernization efforts.

There were still many disagreements in the country and controversies over the utility of the fleet and expenses needed to improve it. Building was started on coastal armored ships and lightweight submarines designed to operate in the Adriatic. Naval strategic thought was inspired by Admirals Bettolo (Chief of Staff from 1907-1911) and Thaon di Revel (Chief of Staff from 1913-1915 and from 1917-1919). The Navy budget was increased in 1909 and in 1911 allowing the acquisition of new fleet units.

In the meanwhile, officers' training was becoming much more appropriate to the level of technological and doctrinal progress in the Navy. A School of Naval Warfare was established at La Spezia in 1908. The School was transferred after World War I to its present location in Livorno with the new name of Institute of Maritime Warfare. The School was the location of official naval doctrine development.

Around 1910, Italian naval preparation began to consider the difficulties associated with warfare in the Adriatic. The Adriatic's geography was a challenging factor: its shallow waters facilitated minelaying but hampered the employment of submarines; well-protected enemy coasts were close by; the Austrian fleet could move with relatively safely through the islands of the Dalmatian coast. Italy lacked bases between Venice and Brindisi; and the low national coastline made it difficult to defend. The mainstream of the Italian Navy concluded that a potential war with Austria, therefore, had to be fought on the offensive at sea. Results of the analysis fueled additional debates between the proponents of battleships and those who desired to reinforce the coastal defenses.

In the meanwhile the Italian Navy saw extensive service in the war with Turkey (1911-1912). The main Italian flotilla was under the command of the Duke of Abruzzi. The Navy supported the successful landings of troops and took much territory. Coastal towns were shelled and blockades were maintained. Successful amphibious landings were made in Tripolitania, Cirenaica and some of the Dodecanese Islands.

After the war, the Navy began to plan for amphibious landings along the Adriatic coastline. Plans were made and assets prepared to carry them out, taking into account the experience gained with the successful conquest of Tripoli during the 1911 war against Turkey. At Tripoli, new doctrine was developed that required the support of sailors specially trained as land fighters. These sea-going soldiers prepared the way for the follow-on landing of regular Army troops which were to be transported to the objective by the Navy.

Also during the war against Turkey, aircraft were used by Italy for military purposes (in Libya) for the first time in history. Chief of Staff Admiral di Revel realized the importance of aircraft in naval war and directed the Navy General Staff to study and develop this element. Additional articles by then-Commander Bernotti appeared around this time on the subject of naval operational art and some were translated into English and appeared in the U.S. Naval Institute *Proceedings*.<sup>6</sup>

#### World War I

The Italian Navy's situation before World War I, with its commitments to the defense of Libya and the Dodecanese Islands, appeared to be anything but easy. The opinion was that the Navy was far from prepared to support Italian foreign policy. When hostilities broke out involving Austria, Italy's position was not initially clear. The Navy began to prepare to fight in the Adriatic. Training was intensified, the defense of ports increased. Light units prepared to sortie and plans for landings on the eastern Adriatic coast were reviewed. Landings on the coast, in support of the Italian Army, were intended to distract the Austrian forces from the northern theater.

At the beginning of 1915 a sound plan for operations in the Adriatic was drawn up. It required that Italy maintain an offensive posture with its larger ships, against a more prudent Austrian Navy, and assumed that the enemy would use mines and submarines. The Triple Alliance with Germany and Austria-Hungary officially ended in May 1915. A new agreement between Italy and the Entente (France and the United Kingdom) was signed on May 10, 1915 and Italy entered the war against Germany and Austria-Hungary. The combined naval assets of the Entente and Italy allowed them to dominate the Adriatic instead of just preventing Austrian transits through the Channel of Otranto.

The contribution the Italian Navy gave to the war effort was important. The strategic objectives of the Italian Navy's employment were: (1) to cut off Austria from the rest of the world by interrupting its sea communications lines; (2) to protect the maritime flow of friendly supplies to and from Albania and in the Mediterranean; (3) to prevent enemy naval

operations along the coast; and (4) to provide naval support, in the Northern Adriatic, to Italian land operations.

Since the Adriatic is essentially a narrow gulf, clashes between large naval formations were unlikely and did not take place. During the Italian army's withdrawal to the Piave River in December 1917, Lieutenant Commander Luigi Rizzo sunk the Austrian battleship *Wien* inside the port of Trieste, using two motor torpedo boats. He pioneered a new form of attack in ports against major units which refused to fight at sea.

Italian destroyers and motor torpedo boats struck against the Austrian fleet at Porto Buso, Trieste, Parenzo, Fasano, and Buccari. Assault teams attacked enemy naval forces twice at Pola. During the latter of these two actions the Austrian battleship *Viribus Unitis* was sunk by a slow-speed two-seat manned torpedo called a *mignatta*. The Italian Navy also was instrumental in the withdrawal operation of about 112,000 soldiers of the Serbian Army and 10,000 horses from Vlore (Albania) to Corfú (Greece), and later of the transportation of an allied expeditionary corps consisting of 97,000 men from Italian harbors to Vlore.

A 66-kilometer long anti-submarine barrier made of nets was laid down in the Otranto Channel to prevent the transit of Austrian submarines to the Mediterranean. This measure was extremely effective and the Austrians tried to destroy the barrier. Initial Austrian attempts to break through the Otranto Channel barrier ended with a naval clash against Italian and Allied units based in Brindisi. The Italians effectively used their motor torpedo boats, hindering the Austrian effort. During a second attempt, on June 10, 1918 near the island of Premuda, the Austrian battleship *Svent Ivstan* was sunk by a motor torpedo boat from a section commanded by Lieutenant Commander Luigi Rizzo. Rizzo became a national hero, and this date was chosen as the Italian Navy's Day.

The Italian Navy also gave a valuable contribution to the development of maritime aviation. In 1914 a special "aviation" organization operated at sea and later two seaplane support ships were built. During the war Italy used six hundred and fifty seaplanes and twelve airships for bombardment, aerial search and blockade operations. The Navy's aircraft were also used against ships, but with no significant results.

During the First World War, Italian naval employment was tempered by a fear of risking their fleet on unfavorable terms against the Austro-Hungarian fleet.<sup>7</sup> The Italian Navy developed an excellent doctrine for the use of their torpedo boats and achieved remarkable results at very low cost. The Italian Navy took no part in Allied convoy efforts and refused to put its fleet under a Mediterranean multinational command. It did,

however, form combined units with the French. In the closing days of the war, Italian naval forces executed a successful amphibious operation at the head of the Adriatic..

Now-Captain Bernotti continued his writings in *Rivista Marittima* during the war and his work was again translated into English and appeared in the U.S. Naval Institute *Proceedings*.<sup>8</sup>

### Inter-War Years

At the end of World War I Italy, like many other nations, had to face a very difficult financial condition. The difference between the pre-war doctrine and the on-the-field results were debated and the opinions initially fell into two main camps.

The first was that the lessons of the *jeune école* had been validated by the war. Large capital ships had proven vulnerable to small vessels. Now-Admiral Bernotti accepted that Italy should take advantage of new technologies afforded by the *jeune école* and that fleet doctrine should be based upon a division of labor.<sup>9</sup> Bernotti wrote that war "had several forms: guerrilla, military and commercial blockade, troop transport, coastal actions, combined operations with the Army." He also noted that during the past war, the main battle fleets had been almost inert, while escorts and submarines operated freely.

The other school asserted that the mere presence of the armored battle squadrons as a deterrent to other main fleet units had allowed the smaller vessels more freedom of action. German Admiral Reinhardt Scheer's statement that "the force of bigger armored ships was the handle of the dagger and the blade was the submarine force" was appreciated in Italy as well.

Several Italian military experts supported the so-called "underwater revolution" which emphasized the role of submarines, considering them to be a decisive weapon. These experts were countered by others who believed that the submarines' success in World War I was due to the lack of preparation of surface ships and their low speed. They also considered submarines unsuitable for night or defensive operations.

Eventually two main theories emerged on the type of surface naval units to be built. One, called herein the "naval tradition," supported the concept of a kernel of traditional warships armed with large caliber guns and with robust self-defenses. Despite self-defense capabilities, additional antiair and antisubmarine protection would be provided by escort ships. The other theory, which may be called the "naval compromise", highlighted the role of quick, light and heavily armed cruiser to be used primarily against non-first level navies. Their

employment was, however, limited to offensive operations and required aircraft carriers for support.

During this era, Commander Oscar di Giamberardino wrote extensively about these issues. Although Di Giamberardino recognized the need to prepare for both offense and defense, he was primarily a supporter of the offensive form of warfare. This meant destruction of the enemy fleet and forcing the enemy to fight in decisive combat. He recognized the usefulness of a small fleet of assault vessels, such as in commando-type operations, but considered them non-decisive. The most important of Di Giamberardino's works was *L'arte della guerra in mare* [The Art of War at Sea] (1937) in two volumes. Its theories influenced many politicians and military men and Di Giamberardino was eventually promoted to admiral.

Even more influential were the writings of Commander Giuseppe Fioravanzo. In a 1925 article in *Rivista Marittima*, he postulated the need for what would eventually become command ships (LCC-class) in the U.S. Navy. Fioravanzo also wrote *La guerra sul mare e la guerra integrale* [War on the Sea and War as a Whole] in two volumes (1930-31). Fioravanzo examined the relationship between politics, strategy, and maritime power, and became a supporter of the defensive form of warfare. He defined the defensive in terms of an operational-level strategy used to protect the sea lines of communications by means of a navy which was employed on the tactical offensive.

Fioravanzo felt that the most important characteristic of a military unit designed to operate in a relatively small sea, such as the Mediterranean, had to be its invulnerability. On the other hand, the most important quality of units conceived to operate in the open oceans had to be autonomy. Fioravanzo's conclusion was that, in narrow sea areas, light cruiser vessels were the worst option, as they were "not small enough to be naturally immune, but not big enough to be artificially immunized."

In 1922, Admiral Bernotti was asked to re-establish the *Istituto di Guerra Marittima* [Naval War College] in Livorno. He wrote a series of important books, including: *Fondamenti di strategia navale* [Fundamentals of Naval Strategy] and *Il potere marittimo nella grande guerra* [Maritime Power in the Great War] (1920); and *La guerra marittima* [The Naval War]: *studio critico sull' impiego dei mezzi nella guerra mondiale* (1923). *Fondamenti di politica navale* [Bases of Naval Politics] was published in 1927.

In his book *The Naval War*, Bernotti discussed how the Navy should be linked to politics, the general naval policies of various nations, the maritime character of the World War, and new strategic possibilities. Bernotti believed that sea lines of communication had to be defended with methods different from

those used during World War I. He advocated a mixed system of direct protection, including antisubmarine and antiair capabilities, and indirect protection. The latter was to be achieved by means of offensive actions against enemy forces in port and at sea.

Bernotti shifted his favor to large warships, but advised that the type of ships currently available in the late 1920s were no longer adequate and could create unrealistic illusions which would hide real and urgent problems. Admiral Bernotti supported the need for aircraft carriers, recognizing that, even if Italy was in a central position in the Mediterranean, "a naval force needing aircraft at any time had to include units capable of transporting a relevant number of aircraft."

Bernotti rejected a compromise solution to the need for naval airpower being proposed at that time: a ship constructed half as an aircraft carrier and half as a light cruiser. Admiral Bernotti's thoughts stimulated debates with the Air Force over the control of naval aviation and conflicted with the views of Admirals Di Giamberardino, Angelo Iachino, and Virgilio Spigai, who were against the construction of aircraft carriers. In the end it was Fioravanzo's theory of defense that influenced the Navy's leaders and resulted in the actual employment of the fleet during the next war.

The theories of General Giulio Douhet got attention as well. As airplanes appeared to be so capable, he assumed that in future wars the biggest effort would have been sustained in the air. Douhet's doctrine considered the sea just as a space to be flown over. Douhet suggested that the Air Force would lead offensive action and the Navy and Army would intervene *a posteriori* to exploit the results of the air battle. In Douhet's opinion co-operation between the Armed Forces was not necessary, since the action carried out by "one head only" was better.

Those who supported Douhet's air theories thought that a naval war could be won by aircraft. Airpower advocates held the view that surface ships could not be successfully defended from air attack. It also became evident that since the sea allowed surprise air bombardment missions against land targets, fleets had also become unsafe when in port.

In 1923, the *Regia Aeronautica* was established and all the aircraft were put under the control of this new Service. The consequence was that, for many years, air doctrine in support of maritime operations suffered and the effectiveness of airborne assets in naval warfare was reduced, with grave consequences.

Most Italian strategic decisions were made without consideration of the naval elements. This problem is typified by the experiences of war in Ethiopia (1935-1936). The war was

fought to increase the empire without consideration of the increased vulnerability at sea. Italy now had to use the sea and was pitted against the strongest maritime nations of the world. Italy's successful participation in the Spanish Civil War from 1936-1939 created false illusions of Italian naval strength. Actually, success resulted from the enemy's weakness.

Italian naval thought between the two world wars developed doctrine based on a strategy which called for little more than interference with a superior fleet or convoys in the Mediterranean. The Mediterranean was especially suited to light and swift forces which would quickly sortie from bases and strike at a fleet offshore--forces which Italy built. The fleet would naturally retain a role for coastal defense. Another logical role for the Italian Navy was the safeguarding of the sea lines of communication to North Africa.

In 1940 Admiral Guido Po, historian of the Navy, wrote *La guerra sui mari* [War at Sea], which stated that current Italian naval strategy was based on: (1), the offensive use of warships and extensive use of submarine packs; (2), the exploitation of Italy's geographical position in the Mediterranean to disrupt the enemy's the communication lines; and (3), seeking the maximum cooperation with the *Regia Aeronautica* to overcome the lack of aircraft carriers. The Italian Navy did not completely follow this doctrine in the next war.

Before World War II, Italian naval plans were to keep their forces together to maximize combat effectiveness against the presumed enemy--France. Due to the preponderance of French naval power in the Mediterranean, Italian naval doctrine was defensive; consciously avoiding doctrine for distant operations or even *guerre de course*.<sup>10</sup> More difficult to understand was the lack of doctrinal development for counterblockade techniques, night operations, or even convoy defense.

#### World War II

Italian Navy units that fought during the war were conditioned by inter-War-era doctrine. For example, cruisers were capable of very high speeds since speed, rather than armor, was believed to be the best weapon to use against numerically and technically superior navies. Following doctrinal debates on the vulnerability of surface ships and the theories of airpower, the Navy entered the war without its own aviation forces, aircraft carriers, and many of the latest technical improvements which might aid air defense. Night fighting equipment and radar were not introduced into the fleet until after their lack was felt in actual combat.

Pre-war doctrinal development and training proved to be inadequate. There was no doctrine for joint actions with the *Regia Aeronautica*. Insufficient attention had been given to the management of maritime shipping and its protection, the doctrine for night fighting, and the role of aircraft in war at sea. The lack of aircraft carriers and inadequate cooperation by the *Regia Aeronautica* in maritime missions afflicted the Navy throughout the war.

Fascist government policy was ambitious and it overestimated the level of military preparedness. The Italian military was told by Mussolini in March 1940 to plan for an air-naval offensive in the Mediterranean; a ground offensive in Yugoslavia, while the Army maintained a defensive posture in Albania, Libya, and the Aegean; and a wait and see attitude on the French border. In April 1940, the Chief of Staff of the Navy, Admiral Domenico Cavagnari, summarized the Navy's key shortfalls to the head of the government. Cavagnari believed that the only possible strategy was defensive. Cavagnari's recommendations were made to an Italian Supreme Command dominated by Mussolini and the Army, neither of whom understood naval warfare.

Concepts for initial operations in the Mediterranean were released by the Chief of Staff on May 29, 1940, about two weeks prior to Mussolini's declaration of war. This initial guidance directed the Navy to maintain a defensive attitude but to exploit opportunities for medium-sized clashes. The Navy was to prepare to defend itself and to act as a fleet-in-being. In fact, no decisive clash occurred during the war, but there were a series of minor engagements throughout the war.

Mussolini had mistakenly predicted a short war, assuming that the resupply of Libya would not become an issue. Hence more than 200 ships of the merchant fleet were located and captured outside the Mediterranean at the beginning of the hostilities.

The command organization of the Italian forces included a Chief of General Staff and three High Commands for each of the three armed forces. These High Commands were headed by the respective Service Chiefs of Staff. Strategic-level tasks were issued by the Chief of the General Staff. Centralized strategy and doctrine was oriented toward the centralization of responsibilities. *Supermarina*, the High Command of the Navy, converted these strategic-level directives into orders and forwarded them to subordinate naval commands. These *Supermarina* orders were very detailed, leaving little freedom of action to local commanders. The tactical commander was provided with limited decision-making authority.

After the brief conflict with France and the removal of the threat of the Toulon fleet, the Italian Navy was tasked to interdict British shipping re-supplying Malta and Alexandria, to

prevent the massing of the British fleet, and to attack the British in ports. The Navy was also told to protect Italian shipping going to North Africa. Due to the limited capacities of North African ports, the Navy had to form numerous small convoys instead of a few big ones; more than 1,200 convoys were formed in one thirty-six month period. The need to protect its own convoys drained resources and limited the Italian fleet's freedom of action against the British. Navy tasking was eventually modified to operate on the offensive only in the central Mediterranean.

Raids against British convoys to Malta provided the source of a number of important clashes between the British and Italian fleets.<sup>11</sup> The most memorable of these are: Punta Stilo (July 9, 1940); Cape Teulada (November 27, 1942); Channel of Sicily (January 10, 1942); Sydra (December 17, 1941); and the operations named Mid-June (June 12-16, 1942) and Mid-August (August 11-14, 1942).

When Germany strongly suggested to Italy that it sortie a fleet to disrupt British sea lines of communication to North Africa, the Italians complied. The resulting Battle of Cape Matapan (March 28, 1941) was an unequal match between the British, who had radar, air support, and Ultra and the Italians who had none of these.<sup>12</sup> Admiral Angelo Iachino, Commander-in-Chief Afloat, paid heavily for his fleet's inability to fight at night or with the proper weapons--a price that was based on the positions that he adopted prior to the war in programming debates. Although the severe losses suffered at Matapan are traditionally imputed to the lack of radar and a suitable doctrine for night fighting, the lack of information and a clearly stated mission are to blame as well.

Both opponents used the strategy of attacking the enemy in port. The British used shipboard-based planes at Taranto (November 12, 1940). The Italian Navy successfully used assault vessels at Souda Bay (March 27, 1941), midget submarines at Alexandria (November 19, 1941), and in later attacks at Gibraltar, Haifa and Malta. The doctrine for raids by assault vessels had been well developed and trained to during the 1930s. During the war, Italy also employed naval forces outside of the Mediterranean. Italian Navy submarines operated in the mid-Atlantic during the war and they achieved a high degree of combat success, perhaps in excess of that of the average German U-boat. The German High Command requested, and the Italian Navy obliged, assistance for naval operations on the Black Sea against the Soviet Union. Additional units fought against the Soviets on Lake Ladoga.

By the end of 1942 the strategic conduct of war became solely defensive, but the effort to maintain the sea lines of communication with Tunisia continued. On July 10, 1943 the Allies

landed in Sicily. As this phase of the war approached an end, Italy attempted to maintain what was left of its fleet for use in diplomatic negotiations. This decision disappointed many crews and commanders who wanted to prove their worth in combat. When the Armistice was declared (September 8, 1943), sixty-five percent of what had remained of the Italian fleet was moved to Malta in accordance with the orders of the new government. The remaining units were scuttled, disabled by the crews, or struck by the Germans.

War against Germany was declared on October 13, 1943. Italian ships began to co-operate with the Allies for escort operations, withdrawal of Italian soldiers from the Balkans, and for special missions. The San Marco Naval Infantry Regiment had an active role in the struggle for the liberation of the peninsula. Many cadets from the Naval Academy fought under the command of the Italian Corps of Liberation.

Not everyone supported Italy's entry into the war on the Germans' side, but everyone in the Navy did his job, nonetheless, even when everything was lost. On September 8, 1943, everyone had the opportunity to decide on which side to fight. Some went with the ships to Malta, some decided to stay or to move to the North because they believed their duty was to continue the war with the Germans. Such complications for naval personnel are rare in many navies, but appear to be more frequent in the history of Italy.

There were many assessments of Italy's performance during the war. According to Admiral Iachino, Commander of Naval Forces from 1940-1943, in his book *Tramonto di una grande marina* [The Decline of a Great Navy] (1959), Italy essentially lacked "adequate preparation to carry out strategic and tactical operations."

In 1956 retired Admiral Bernotti clearly and concisely evaluated the Italian Navy performance in the Second World War in his book *I principi della guerra nel secondo conflitto mondiale* [The Principles of War in the Second World War]. He affirmed that the lessons learned from history emphasized that the conduct of war presupposes risk and that the necessary aggressive attitude required in war consists of both the will and the capability to act. In Bernotti's opinion, the policy of avoiding battle with superior forces was flawed.

Bernotti also argued that centralized commands should not expect automatic and passive obedience to combat tasking but should encourage a climate of initiative and ingenuity by subordinates in combat. The lessons learned by Italy in the war reflect German General Von Blume's thoughts on the issue: "whoever wishes to take only decisions whose consequences do not include fear, soon finds himself in the hands of the enemy."

Italian naval doctrine in World War II can also be criticized because it was not clear that, when a defensive posture is applied, it must be pursued to the end. Cooperation between the Armed Forces was not efficient due to the absence of joint doctrine. Furthermore, doctrine did not provide for an assessment of risk that considered the advantages that can come from lost battles when the behavior of the forces had been admirable. The gallant behavior of officers and crews must be mentioned as it directly led to some of the Italian successes and was evident also during defeats.

Italian Navy doctrine in World War II was probably proper for the conditions at the time. The problems that beset the fleet were beyond that of the Navy to correct. Given the resources provided, the overall strategy of the war effort, individual Service and overall strategic culture, geography and demographics, and the type of government, the Italian Navy performed about as well as could be expected. Italy had only been a unified nation for about a hundred years and their relative success against the Royal Navy during the war, despite serious handicaps, speaks well of their combat effectiveness.<sup>13</sup>

#### After World War II

At the end of the 1940's and at the beginning of the 1950's, the tasks of the Navy were defined as "the defense of the Adriatic and Ionian maritime fronts against Yugoslavia." Italy's naval role changed over the years as it adhered to the North Atlantic Treaty, the European Economic Community, and the Western European Union, and due to its strategic position in the Mediterranean. Italy became the link between Europe, North Africa, and the Middle East. Although Italy had become a medium power nation, it had first-class responsibilities and duties.

NATO's southern flank was generally considered less vulnerable to direct Soviet aggression, but the likelihood of an air-naval threat in the Mediterranean placed a great deal of responsibility on the Italian Navy and imposed the need for an adequate numerical and qualitative level. When Italy first joined NATO, its tasks were "the protection of merchant and military shipping, coastal defense, and mine countermeasures operations." Over time, the Navy's main tasks shifted to providing support to the U.S. Sixth Fleet, contribution to the maintenance of sea control and the protection of the sea lines of communication in the Mediterranean.

The General Staff of the Navy published a white paper in 1973 entitled *Prospettive e orientamenti di massima della Marina Militare per il periodo 1974-1984* [Principal Perspectives and Orientations for the Military Navy in the period 1974-1984]. The white paper defined the Navy's missions and tasks: a credible and

continuous presence; the protection of trade; offensive operations wherever required; the direct and indirect participation in the protection of the allied naval deterrent; and limited-scope immediate reaction with amphibious forces. It further outlined fleet improvements that would be required if the Navy were to be expected to carry out autonomous missions. This document was very important because it represented the first exhaustive official statement on the naval situation since the end of World War II.

In the post-World War II period, most commentary on the Navy occurred from unofficial sources. The lack of forceful personalities able to express their ideas on naval policy and doctrine was strongly felt. Old writers like Admirals Bernotti, Fioravanzo and Di Giamberardino continued to express ideas based on their experiences in war and how that applied in the new international situation.

Admiral Di Giamberardino wrote a short piece entitled *Il prossimo conflitto mondiale* [The Next World Conflict] (1947). He also updated his classic *L'arte della guerra in mare* [The Art of War at Sea]. In the revised version, Di Giamberardino stated that "doctrinal preparation in the world war turned out to be in part erroneous and lacking." He explored the relations between politics and the art of war, and defined the way in which strategic maneuver and the employment criteria for naval air forces should be conceived.

Admiral Bernotti had retired in 1940, but continued to write on tactics and doctrine for many years. His later works included *La Guerra sui mari 1939-1941* [The War at Sea 1939-1941] (1947). He published several articles defining a new naval strategy for the Mediterranean and supported emerging NATO strategies. In 1956, Admiral Bernotti wrote a final piece for the U.S. Naval Institute *Proceedings* in which he attacked the former fascist regime in Italy during World War II.<sup>14</sup> This article criticizes the *Regia Aeronautica* for its over-optimistic claims and over-riding influence. Bernotti's *Cinquanta anni nella marina militare* [Fifty Years in the Military Navy] (1971) was extremely well received.

In 1956 Admiral Fioravanzo wrote the *Storia del pensiero tattico navale* [A History of Naval Tactical Thought] in which he discussed the appropriate doctrine for the new international situation in which the use of nuclear weapons was possible. A *History of Naval Tactical Thought* is a concise work that summarizes naval tactics, tactical concepts (doctrine), and provides illustrative battles in the age of oared ships, the age of sail, the age of the screw propeller, and the age of naval aviation. This book was translated into English and published by the U.S. Naval Institute in 1979.<sup>15</sup>

Fioravanzo also wrote that the disarmament policies of the inter-War years had stimulated scholars and engineers to find legal technological improvements to warships, resulting primarily in increased speed and weaponry. Because of the inevitable security leaks and the resulting exchange of information on technological progress, gaining positions in any one area had become impossible. Fioravanzo advocated a compromise between speed, weaponry, and armor. Admiral Fioravanzo co-authored *The Italian Navy in World War II* which was published in 1957 by the U.S. Naval Institute.

Another post-war author was Admiral Virgilio Spigai, who became Chief of Staff of the Navy in 1968. Spigai documented the Italian Navy's shortcomings in relation to its tasks in *Il problema navale italiano* [The Italian Naval Problem] (1963). He always worked to have the Navy's problems expressed in terms of the broader issues of global naval strategy and developments. Spigai dedicated himself to convincing the politicians that Italy, a nation that was deeply involved with sea for its economy and security, needed a strong Navy.

Other writers, many of whom were civilians, also wrote on naval matters, but their approach was more historical than doctrinal. These included Commander Marc'Antonio Bragadin, Admiral Angelo Iachino, Mr. Franco Micali Baratelli, Professor Virgilio Ilari, Professor Alberto Santoni, Dr. Giorgio Giorgerini, Commander Ezio Ferrante, Professor Carlo Maria Santoro, and many others.

Italy, according to the current Chief of Staff of the Navy, Admiral Angelo Mariani, will be called to a more active participation in international affairs and must reconsider the relationships between foreign policy and military capabilities. Italian Navy units have contributed to multinational operations in Lebanon (1981-1984), Persian Gulf (1987-1991), Somalia (1992-1994), and Adriatic (1992-ongoing).

Even if it will maintain a limited numerical level, the Italian "naval instrument" must be able to support a maritime-oriented policy no longer dedicated to the defense of the national boundaries. According to this vision, Sir Julian Corbett's joint strategic concept is considered more important than the one, typically naval, expressed by Admiral Alfred Thayer Mahan.

### Conclusions

One of the most important conclusions to be reached from this research is the difficulty in finding an exact word equal to the term doctrine in other countries. When looking for parallels, it will be necessary to explore the full range of possible topics that are sometimes referred to as strategy, operational art,

tactics, military art, and naval art/science, etc. Whereas in the U.S. doctrine is generally considered guidance, in many other nations doctrine is more directive in nature. Hence, there are problems in attempting to find exact parallels. These problems must be overcome before any meaningful discussions on doctrine can take place.

Second, in order to uncover past navy doctrine, it is necessary to review navy and military history in order to ascertain behavior. Generally this is because of the lack of written doctrine in many navies. This does not mean that doctrine did not exist--on the contrary naval doctrine always existed, but not necessarily in the form most recognizable by those more familiar with land armies.

Third, the difficulties in building a true national Italian Navy doctrine can be compared to current efforts to build multinational navy doctrine. Italy attempted to integrate a number of national fleets and found that integrating the traditions and doctrines of the Sardinian and Neapolitan Navies appeared to be the best solution.

Next, it appears that the influence of doctrine in foreign navies was extremely strong in the case of Italy. Similarly, there has been a great deal of interest in Italian naval doctrine in the United States--evidenced by the frequency of translation of many important theoretical works by the U.S. Naval Institute. All of these theoretical works which were translated were authored by serving or retired uniformed officers. Apparently in Italy, writing theoretical works on naval warfare is not an impediment to promotion. Civilians do not appear to have had nearly the impact as they have had in other nations.

Fifth, there appears to have been a great deal of doctrinal innovation in the Italian Navy. Whereas in other navies, the age of sail appears to have shifted emphasis in the improvement of combat capability to the procurement of some new hardware, the Italian Navy appears to have a tradition of continuing to look for improvements to combat potential by attempting to fight better with the technologies that have been made available.

Sixth, the Italian case study is important because there is no tradition of superpower status for unified Italy. France, Spain, and Britain all enjoyed superpower status at one time, whereas modern Italy has only attempted to be a dominant regional power. Hence, the Italian Navy is an excellent case study for the concept of a medium-power navy. Medium-power does not mean less than first-class, rather it only refers to the desire to "try to create and keep under national control enough means of power to initiate and sustain coercive actions whose outcomes will be the preservation of its vital interests."<sup>16</sup> Italy's naval strategies, —

art, doctrine, etc., appear to have been in conformance with its national self-identity.

Finally, Italy appears to have a strong tradition of analysis of past wars and learning lessons. Needless to say, although the Navy may have learned the proper lessons, they do not appear to have discovered the "magic elixir" of how to explain those lessons to politicians who are unfamiliar with the sea environment.

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